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EXAMINER	
YAM, STEPHEN K	
ART UNIT	PAPER NUMBER
2878	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/591,337	REIME, GERD	
	Examiner	Art Unit	
	STEPHEN YAM	2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *35-67* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *35-67* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 August 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *8/31/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims *** are objected to because of the following informalities:

In Claim 35, line 9, a comma should be placed after "at a receiving end" for clarity.

In Claim 35, lines 9-10, "a" should be placed before "detecting element" for proper grammar.

In Claim 35, lines 10-11, "the at least one light guide" lacks proper antecedent basis as it is unclear whether the term refers to the light guide associated with the emitting element or alternatively the light guide at the receiving end.

In Claims 40 and 46, "the means for producing the light field" lacks proper antecedent basis.

In Claim 46, "the evaluating unit" lacks proper antecedent basis.

***

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 37-39, and 45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claims 37 and 39, it is unclear what is meant by the structure "argumented" with increasing distance from the emitting/receiving element.

Regarding Claim 38, it is unclear how the "emitting light guide" can be associated with the "receiving element".

Regarding Claim 39, it appears that Applicant may have intended to recite "receiving element" instead of "emitting element".

Regarding claim 45, the phrase "preferably mutually parallel" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

4. The following is a quotation of the fourth paragraph of 35 U.S.C. 112:

> Subject to the following paragraph, a claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed. A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.

5. Claims 52 and 60 are rejected under 35 U.S.C. 112, fourth paragraph, as not further limiting the parent claim.

Regarding Claims 52 and 60, a value is inherently either fixed ("static") or non-fixed ("dynamic"), and if it is non-fixed, there must be some external control or factor changing its value. Thus, Claims 52 and 60 do not set forth a further limitation of the claimed subject matter of parent Claims 51 and 59 as required by 35 U.S.C. § 112, 4th paragraph.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 35-40, 43, 44, 46, 47, 50-54, 56, 57, and 59-65 are rejected under 35 U.S.C. 102(b) as being anticipated by Masotti et al. WO 00/77447.

Regarding Claims 35 and 56, Masotti et al. teach (see Fig. 1, 4, 8, 9) a monitoring device and method for a space that is to be monitored for entry of at least one body via an access area (see Page 4, lines 9-11) comprising: at least one emitting element (5) which introduces luminous radiation into the access area (see Fig. 9); and at least one receiving element (17) which receives the luminous radiation (see Fig. 9), wherein at least one light guide (1x) is associated with the emitting element, said light guide emitting the luminous radiation into the access area as a diffuse planar light field (see Fig. 9 and Page 12, lines 14-15) transversely to a longitudinal direction of the at least one light guide (see Fig. 9); and wherein at a receiving end, at least one light guide (1y) is provided as a detecting element (see Page 12, lines 16-20) for detecting the diffuse light field transversely to the longitudinal direction of the receiving end at least one light guide (see Fig. 9) and as transmitting means for transmitting the light out of the light field to the receiving element (see Fig. 9 and Page 12, lines 16-20).

Regarding Claim 36, Masotti et al. teach the emitting light guide associated with the emitting element comprises a structure (11) (see Fig. 4) for radiating the light field.

Regarding Claim 37, Masotti et al. teach the structure provided to be "argumented" with increasing distance from the emitting element (since the light is emitted along the entire length of the structure).

Regarding Claim 38, Masotti et al. teach the emitting light guide associated with the receiving element comprises a structure (11) (see Fig. 9 and Page 12, lines 16-18) for receiving the light field.

Regarding Claim 39, Masotti et al. teach the structure provided to be "argumented" with increasing distance from the receiving element (since the light is received along the entire length of the structure).

Regarding Claims 40 and 57, Masotti et al. teach the light guide arranged in such a manner that the luminous radiation is radiated at least partially with a component that is radial and axial in regard to the light guide (see Fig. 4, 4A, 9 and Page 12, lines 14-15).

Regarding Claim 43, Masotti et al. teach an evaluating unit (19) for evaluating shadowing of the light field in a direction of the receiving light guide that occurs upon entry or passage of a body into or through the light field (see Page 13, lines 23-28).

Regarding Claim 44, Masotti et al. teach at least two light fields (left-vertical Fp and right-vertical Fp in Fig. 8) are provided (see Fig. 8) which are evaluated separately by an evaluating unit (19) (since there are two separate light fields) and are arranged one behind the other in a direction of motion of the body (when moving left to right).

Regarding Claim 46, Masotti et al. teach at least two light fields are provided which are subdivided into a plurality of partial light fields (see Fig. 8) which are arranged one above the other (see Fig. 8) and are evaluated separately by an evaluating unit (19) (since there are two separate light fields).

Regarding Claims 47 and 63, Masotti et al. teach at least two light field regions arranged at an angle to one another are provided in the access area (see Fig. 8).

Regarding Claims 50 and 64, Masotti et al. teach the light field regions cross in the access area (see Fig. 8).

Regarding Claim 51, Masotti et al. teach detection means (19) which detect entry or passage of a body as soon as a total luminous power (see Page 9, lines 18-20) which is what falls below a predefined or predefinable threshold value (since an alarm is triggered through a defined trigger point based on the total detected intensity, there must be a pre-defined threshold value to compare the detected intensity to define an alarm trigger).

Regarding Claim 52, Masotti et al. teach the threshold value is fixed or dynamically controlled (since all values are either fixed ("static") or non-fixed ("dynamic")).

Regarding Claims 53 and 65, Masotti et al. teach a timing waveform of a shadowing process (see Page 13, lines 23-27) corresponding to a reduction of a total luminous power reproduces a profile of the body crossing the access area (see Page 13, lines 27-32).

Regarding Claim 54, Masotti et al. teach at least two mutually associated light fields (left-vertical Fp and bottom Fp in Fig. 8) are provided (see Fig. 8) and wherein comparison means (19) are provided for temporally correlation of one or both of a falling below a threshold value or a total luminous power (since 1y' receives a total luminous power for both the left Fp and the bottom Fp).

Regarding Claim 59, Masotti et al. teach, for the purposes of determining the entry or passage of a body into or through the light field, shadowing of the light field in a direction of the receiving light guide is evaluated (see Page 13, lines 23-28) and an entry or a passage of a body is detected as soon as a total luminous power falls below a predefined or predefinable threshold value (since an alarm is triggered through a defined trigger point based on the total detected

intensity, there must be a pre-defined threshold value to compare the detected intensity to define an alarm trigger).

Regarding Claim 60, Masotti et al. teach the threshold value is fixed or dynamically controlled (since all values are either fixed ("static") or non-fixed ("dynamic")).

Regarding Claim 61, Masotti et al. teach at least two light fields (left-vertical Fp and bottom Fp in Fig. 8) are provided (see Fig. 8) which are evaluated separately by an evaluating unit (19) (since there are two separate light fields) and are arranged one behind the other in a direction of motion of the body (when moving through the bottom Fp and then the left Fp), are temporally correlated in respect of one or both of a falling below a threshold value or a total luminous power (since 1y' receives a total luminous power for both the left Fp and the bottom Fp).

Regarding Claim 62, Masotti et al. teach at least two light fields (left-vertical Fp and bottom Fp in Fig. 8) are provided (see Fig. 8) which are evaluated separately by an evaluating unit (19) (since there are two separate light fields) and are arranged one above the other (when the orientation of the page of Fig. 8 is vertical), are temporally correlated in respect of one or both of a falling below a threshold value or a total luminous power (since 1y' receives a total luminous power for both the left Fp and the bottom Fp).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 41-43, 45, 48, 49, and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masotti et al.

Regarding Claims 41, 42, and 58, Masotti et al. teach the device and method in Claims 35 and 56, according to the appropriate paragraph above. Masotti et al. also teach (see Fig. 9), for each light field, there is provided a single emitting element (5) (see Page 10, lines 27-31) which irradiates light into the emitting light guide and a receiver (17) which receives the light from the receiving light guide. Masotti et al. do not teach a single receiver. It is well known in the art to reduce the number of components in the system to save costs and as optimal depending on the size of the desired detection area. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a single receiver in the device and method of Masotti et al., to incorporate the device for small detection fields and reduce costs and complexity of the device by using a reflector on the opposite end, like the source bar as taught by Masotti et al. (see Page 10, lines 27-31) instead of a more expensive photodiode.

Regarding Claim 43, Masotti et al. teach the emitting element as a light emitting LED (see Page 6, line 2) and the receiver as a photodiode (see Page 12, line 18).

Regarding Claims 45, 48, and 49, Masotti et al. teach the device in Claim 35, according to the appropriate paragraph above. Masotti et al. also teach using a plurality of source-receiver pairs to improve the accuracy and complexity of measurements (see Page 14, lines 11-12). Masotti et al. do not teach the emitting light guide and the receiving light guide for the two mutually parallel light fields are arranged next to one another, or providing each light field region with at least two light fields which are arranged one behind the other in a direction of

motion of the body, or one light field arranged above the other. It is well known in the art to provide two adjacent parallel sources and detectors, to improve the profile detection of an entering object and to reduce the false detection rate. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the emitting light guide and the receiving light guide for the two mutually parallel light fields are arranged next to one another, and providing each light field region with at least two light fields which are arranged one behind the other in a direction of motion of the body, or one light field arranged above the other, in the device of Masotti et al., to improve the accuracy of measurements and provide a reduced false error detection likelihood, and since it has been held that mere duplication of the essential working parts of a device and rearranging parts of an invention involve only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.,* 193 USPQ 8 (1977); *In re Japikse*, 86 USPQ 70.

10. Claims 55, 66, and 67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masotti et al. in view of Huff US 2004/0135072.

Regarding Claims 55, 66, and 67, Masotti et al. teach the device in Claim 35, according to the appropriate paragraph above. Masotti et al. also teach registering maximum values of a maximum shadowing effect detected by detection means for each body (height detection- see Page 13, lines 23-31). Masotti et al. do not teach a counter is provided for determining bodies crossing the access area. Huff teaches (see Fig. 1-3) a similar device with a counter provided for determining bodies crossing the access area (see Paragraph 0036). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a counter is

provided for determining bodies crossing the access area, as taught by Huff, in the device of Masotti et al., to incorporate the device for counting admission of people into a public area or other people or object counting usages, as taught by Huff (see Paragraph 0036).

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sakaguchi US 7,122,782, Hagan et al. US 4,571,498, Full US 6,051,829, and Smart US 4,566,337 teach similar optical barrier devices.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to STEPHEN YAM whose telephone number is (571)272-2449. The examiner can normally be reached on Monday-Friday 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on (571)272-2328. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Stephen Yam/
Primary Examiner, Art Unit 2878